REMARKS/ARGUMENTS

Claims 9-14 remain in this application. Claims 1-9 have been withdrawn as the result of a restriction requirement. Claim 15 has been added. The examiner has acknowledged that claims 1-9 are directed to allowable subject matter. Claim 9 adds an additional feature from the specification.

By way of review, the present invention relates, in general, to a process for the removal of hydrogen peroxide from spent pickle liquor and, more specifically, to the application of a thermal process for the decomposition of hydrogen peroxide that is present in spent pickle liquor generated from a pickling process. Generally, the apparatus comprises a tank equipped with an inlet, an outlet, at least one vent, a heat source and an internal baffle. The tank is of sufficient capacity to accommodate a quantity of pickle liquor solution generated by a pickling process, wherein the pickle liquor residence time in the tank is from about 30 minutes to about 60 minutes and preferably is about 45 minutes. Exposing the pickle liquor to heat, in accordance with the present invention, converts potentially problematic hydrogen peroxide into water and oxygen gas.

The rejections and objections raised by the Examiner in the Office Action will now be considered sequentially.

Claim 9 has been amended to clarify that the tank is adapted for the removal of hydrogen peroxide from pickle liquor generated from a pickling process for steel.

The Examiner has rejected Claims 9, 10, 13, and 14 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,318,448, filed September 6, 1963, issued May 9, 1967, to Fryer (hereinafter referred to as the "Fryer patent"). Applicant respectfully submits that the amendments made herein address and overcome these rejections. Specifically, Claim 9 has been modified to require a tank adapted for the removal of hydrogen peroxide. Antecedent basis for the amendment to Claim 9 can be found in Paragraphs [0002] and [0006] which state that "the present invention provides an apparatus and a process for the removal of hydrogen peroxide from spent pickle liquor used in a steel strip pickling process."

The Fryer patent does not disclose the use of a tank for the removal of potentially harmful hydrogen peroxide. Because the Fryer patent does not teach every element of the present invention a rejection under 35 U.S.C. §102(b) is no longer proper.

The Examiner has, in the alternative, rejected claims 9-14 under 35 U.S.C. §103 based upon Fryer. Applicant respectfully submits that the amendments made herein address and overcome these rejections. The modification of claim 9 to include the element of a tank adapted for removal of hydrogen peroxide from spent pickle liquor used in steel processing clarifies that a person having ordinary skill in the art would have no suggestion to modify the Fryer patent to arrive at the present invention. The primary difference between Fryer and the present invention is that Fryer is directed towards removing solid contaminants, such as sand, from crude oil, whereas the present invention is directed towards removing hydrogen peroxide from spent pickled liquor. Although the Fryer patent discloses the removal of contaminant gas, the Fryer patent discloses a passive removal system substantially different from the active removal process of the present invention. The Fryer patent states, at Column 4, lines 36-38, states that, "The gas separating from the liquid constituents rises into this collecting dome and is withdrawn..." The passive gas disposal means disclosed in Fryer collects contaminant gas as it naturally exudes from crude oil. The invention of the present invention, however, actively induces the decomposition of hydrogen peroxide to oxygen gas and water. Applicant respectfully contends that to modify the passive gas disposal system to arrive at the active disposal system requires an impermissible use of hindsight.

The Fryer patent at Column 3, lines 27-30 states that "By reason of this design the solid contaminants are continuously self-draining under gravity along the inclined bottom into the centrally disposed collecting sump 13." The removal of hydrogen peroxide, unlike the removal of solid contaminants, does not require a separate drain for deleterious compounds. Rather than simply providing a drain for the removal of solid contaminants, the present invention *converts* hydrogen peroxide into the innocuous compounds of water and oxygen gas. A valve is provided for the removal of excess gaseous pressure, however, it is the chemical conversion of the contaminant rather than the mere physical removal of the contaminant that makes a suggestion to modify the Fryer patent impermissible.

Additionally, Applicant respectfully contends that the application of heat in accordance with the present application is performed for a substantially different purpose than the application of heat in Fryer. Column 4, lines 46-50 of the Fryer state that, "Steam or other suitable heating medium is admitted to the heat exchange tubes 18 and the entire apparatus is brought up essentially to its normal operating temperature most appropriate for effective operation with the particular type of crude oil being processed." The application of heat disclosed in the Fryer patent is used to provide "an improved mode of initiating operation of crude oil treating equipment involving preloading the equipment with hot water and utilizing the heat capacity of the latter quickly to bring crude oil to a proper separating temperature and thereby establishing and maintaining a minimum surface tension at the oil-water interface…"

Column 2, lines 49-54. There is no suggestion that the heat is used to convert a potentially harmful gas into innocuous components. The applied heat of the present application, unlike the heat application in Fryer, is used to *convert* a contaminant.

In summary, the rejections under 35 U.S.C. §102(b) and §103(a) have been overcome and should be withdrawn. Accordingly, the present application as amended herein, is now in form for allowance and early reconsideration and allowance of the claims, as currently amended, is earnestly solicited.

Respectfully Submitted,

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